REMARKS

Introduction

Claims 1-14 are pending in this application. Claims 1, 5, and 6 are independent and have been amended.

The claim amendments presented herein

In claim 1, the features of "which is used for Time Division Multiplexing (TDM) system comprising a TDM line unit and a data service processing unit, comprising" have amended to recite "connected with a TDM line unit and a data service processing unit, wherein the integrated cross-switching unit comprises." Support for this amendment can be found in the originally filed application, at least in Figure 2, and at page 12, lines 9-11, which discloses that the bus identification module is connected with a conventional TDM (such as SDH/SONET) line unit and a data service processing unit.[1]

Claim 5 is amended similarly to to the amendments to claim 1.

Claim 6 has been amended to correct a typographical error.

Applicant submits that no new matter has been added.

[1]It is of course to be understood that the references to various portions of the present application are by way of illustration and example only, and that the claims are not limited by the details shown in the portions referred to.

The claim rejections under 35 U.S.C. § 103

Claims 1-4 and 6-14 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent No. 6,621,828 to Field in view of U.S. Patent No. 5,809,021 to Diaz; and claim 5, as being obvious from Field in view of U.S. Patent Application Publication No. US 2002/0075854 A1 to Kumar.

Applicant respectfully traverses these rejections, and submits that independent claims 1, 5, and 6, together with the claims dependent therefrom, are patentably distinct from the cited references for at least the following reasons.

(i) The Examiner likens the ATM line cards of Field to the bus identification module of the present invention. Applicant respectfully disagrees. Field, in column 6, lines 34-37 (as cited by the Examiner), discloses that "[t]he ATM line cards 40 perform header translation by identifying the coming virtual path identifier (VPI)/virtual channel identifier (VCI) in cells and replacing the VPI/VCI with a cell connection identifier (CID)." It is clear that the operation described in this portion is performed by the **ATM line cards (corresponding to the TDM line unit).**

However, the present invention is directed to an integrated **cross-switching** unit. It is clear to a person having ordinary skill in the art that a switch includes a line card and a switch card. The integrated cross-switching unit, as defined in currently amended claim 1, is connected with a TDM line unit and a data service processing unit. Hence, the integrated cross-switching unit is a unit other than the TDM line unit, but does not function as the TDM line card per se (corresponding to the ATM line cards of Field).

Therefore, the bus identification module of the present invention is not disclosed by Field.

(ii) As discussed in the above section (i), the ATM line cards 40 identify the coming VPI/VCI in cells. It can be understood by a person having ordinary skill in the art that the VPI/VCI represents a logical path of a cell between adjacent network nodes (ATM switches). Hence, it is clear that what the ATM line cards 40 identify is the specific traffic flow. However, according to currently amended claim 1 of the present invention, "*the bus identification module is adapted to identify traffic source, to transmit traffic from the TDM line unit to the cross-connecting unit and to transmit packets from the data service processing unit to the packet scheduling module*". In other words, with reference to Figure 2, the bus identification module identifies from the traffic (i.e., from the TDM line unit or the data service processing unit); if the bus identification module identifies that the traffic comes from the TDM line unit (in this case, the backplane bus is identified as a TELECOM bus), it transmits the traffic to the cross-connecting unit; and if the bus identification module identifies that the traffic comes from the data service processing unit (in this case, the backplane bus is identified as a packet bus), it transmits the traffic to the packet scheduling module. Therefore, the bus identification module differentiates the current usage (TDM or packet) of a physical bus. Hence, what the bus identification module identifies is the type of the physical bus, i.e., the source of traffic is the type of a physical bus, but not a logical path.

(iii) According to Field, after the identification, the VPI/VCI is replaced with a cell connection identifier (CID), i.e., a conversion. However, according to the present invention, after the identification, the bus identification module transmits the traffic to corresponding units (the cross-connecting unit or the packet scheduling module), i.e., a process of transmission.

In view of at least the above sections (i)-(iii), Applicant submits that nothing in Field would teach, suggest, or motivate a person having ordinary skill in the art to achieve the technical solution of the present invention. And nothing in Diaz would teach, suggest, or motivate the technical solution of the present invention -- even were a person having ordinary skill in the art to consider the combination of Field and Diaz. Accordingly, Applicant submits that currently amended claim 1 of the present invention is clearly allowable over Field and Diaz, whether considered separately or in any permissible combination (if any).

With regard to technical effects of the present invention, according to the invention, only one bus identification module is connected with both of the TDM line unit and the data service processing unit and can identify the traffic source, and thus the TDM line unit and the data service processing unit can be multiplexed to one physical bus, and the number of the backplane buses can be reduced.

Independent claim 6 recites features which are similar in many relevant respects to those discussed above in connection with claim 1. Accordingly, claim 6 is believed to be patentable for at least the same reasons as discussed above in connection with claim 1.

With respect to independent claim 5, that claim also recites features which are similar in many relevant respects to those discussed above in connection with claim 1. And nothing in Kumar would supply what is missing from Field, as Field in view of Kumar would not teach, suggest, or motivate the technical solution of the present invention either. Accordingly, independent claim 5 is respectfully submitted to be patentable over Field and Kumar for reasons similar to those discussed above with respect to claim 1.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Respectfully Submitted

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